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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,121	07/16/2001	Hiroshi Shinriki	P 280042	2764

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EXAMINER	
LUND, JEFFRIE ROBERT	

ART UNIT	PAPER NUMBER
1763	9

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

FILE COPY

Office Action Summary	Application No.	Applicant(s)	
	09/830,121	SHINRIKI ET AL.	
	Examiner	Art Unit	
	Jeffrie R. Lund	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-14 is/are pending in the application.

4a) Of the above claim(s) 8-14 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 16 July 2001 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-7, drawn to a coating apparatus.

Group II, claim(s) 8-14, drawn to a coating method.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of Group I is a process gas supplying and introducing means; the special technical feature of Group II is a method of injecting a raw material gas at a first pressure and then injecting the raw material gas at a second pressure.

3. During a telephone conversation with Dale S. Lazar on September 17, 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-7. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the bellows 160 and the movable shaft 162 (figure 1) as described in the specification (page 11 lines 15-33). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 160 (page 11 lines 21, 23), 162 (page 11 line 26), 88 (page 15 line 30), and "line X-X" (page 10 line 2, and page 26 line 11). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because of the following informalities: on page 15 line 7 reference number "74" should read --78--; on page 15 line 7 reference number "72" should read --76--; on page 15 line 25 "the" should read --The--; and on page 21 line 19 after "rate" a period should be added.

Appropriate correction is required.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12-22 of U.S. Patent No. 5,958,140 ('140). Although the conflicting claims are not identical, they are not patentably distinct from each other because '140 differs from the present invention in only minor and obvious ways.

9. Claim 5 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12-22 of U.S. Patent No. 5,958,140 ('140) in view of Selyutin et al. Patent '140 teaches a film deposition apparatus that includes a process chamber, process gas supply means, evacuating means, process gas introducing means, and a susceptor for holding a target (object). Patent '140 differs from the present invention in that it does not teach a vertical moving mechanism for moving the susceptor in a vertical direction. Selyutin et al teaches a vertical moving mechanism for moving the susceptor vertically. The motivation for adding the moving mechanism of Selyutin et al is to enable the vertical movement of the susceptor to enable the loading and unloading to the process chamber and to optimize the

placement of the susceptor for each process. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the vertical moving mechanism of Selyutin et al to the apparatus of Patent '140.

Claim Rejections - 35 USC § 102

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Arami et al, US Patent 5,958,140.

Arami et al teaches the claimed invention in figures 2-5 and throughout the specification. The examiner notes that the specific type of gas supplied to the chamber is an intended use of the apparatus, and the apparatus of Arami et al is inherently capable of supplying any desired gas to the chamber to perform any desired process.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

11. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Tompa, US Patent 6,289,842.

Tompa teaches the claimed invention in figures 1 and 2 and throughout the specification.

12. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Roithner et al, US Patent 6,289,842.

Roithner et al teaches the claimed invention in figures and throughout the specification, specifically, figure 1 and column 3 lines 46-55. The examiner notes that the specific type of gas supplied to the chamber is an intended use of the apparatus, and the apparatus of Roithner et al is inherently capable of supplying any desired gas to the chamber to perform any desired process.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roithner et al in view of Selyutin et al.

Roithner et al teaches a film deposition apparatus that includes a process chamber 12, process gas supply means 38, 40, 42, evacuating means 16, and process gas introducing means 24.

Roithner et al differs from the present invention in that it does not teach a table to support the substrate 44 or a vertical moving mechanism for moving the table in a vertical direction.

Selyutin et al teaches a substrate support and a vertical moving mechanism for moving the susceptor vertically.

The motivation for adding the support and moving mechanism of Selyutin et al in the apparatus of Roithner et al is to provide the required support for supporting and heating the substrate, and to enable the loading and unloading to the process chamber and to optimize the placement of the substrate for each process.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the table and the vertical moving mechanism of Selyutin et al to the apparatus of Roithner et al.

Allowable Subject Matter

15. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. The following is a statement of reasons for the indication of allowable subject matter: the pressure detecting means, dilution gas adding means, and dilution gas control means as specifically claimed in claim 6 and the process gas introducing means as specifically claimed in claim 7 were not found in or suggested by the art.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art teaches the technological background of the invention.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (703) 308-1796. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Jeffrie R. Lund
Primary Examiner
Art Unit 1763

JRL
September 22, 2003